GISette
Email Newsletter

April 2007

Welcome to the twenty-fifth edition of the **MassGIS GISette**, a bi-monthly newsletter e-mailed to over 1400 of our users and partner agencies to keep them informed of data updates, GIS events, and on-going technology developments. This newsletter will not replace more focused e-mails that many of you currently receive. A page on our website has been created for the GISette. There you will find back issues of the GISette and an online subscription form.

While our primary intent in publishing the GISette is to disseminate information related to MassGIS initiatives and data development in particular, we also see the GISette as a means of communicating public agency GIS news. So we encourage readers to send in updates or announcements concerning public agencies that they would like included in the GISette. We particularly want to encourage submission of announcements concerning data development projects. Announcements should be sent to Paul Nutting at **paul.nutting@state.ma.us.**

And the Winner Is….

The Executive Office of Transportation and Public Works (EOTPW) has officially approved the selection of Greenman Pedersen Incorporated (GPI) as Massachusetts' oblique imagery vendor. MultivisionUSA, a subsidiary of GPI, will be providing the image capture, processing, and delivery, as well as the training and technical support. With this spring's weather not conducive to image capture, EOTPW will be working with Multivision to schedule an image capture plan starting late fall and ending next spring. At this point, EOTPW plans to have Multivision capture nine-inch resolution 4-way imagery (all four directions) covering the entire state. In addition, a nine-inch resolution nadir (similar to an ortho, but not as accurate) image will also be provided. The Pictometry Community image is a 13-inch resolution image as a comparison.

These new images will be owned by Massachusetts with no distribution restrictions. A software package developed by Multivision will be included for viewing and measuring and will only be licensed for Massachusetts agencies. Multivision will work with MassGIS to deploy a web-based oblique viewer program that will provide unrestricted access to the new imagery, including measuring and printing capabilities.

EOTPW will be also looking into having Multivision provide 4-inch resolution 4-way imagery for next spring, but will need to work with all interested agencies to determine total funding amounts available for next spring.

The current imagery and software provided by Pictometry has a perpetual license (available only to government) so you may continue to use EFS and view the Pictometry imagery for as long as you wish.

Watch the GISette for updates as the procurement progresses.

ArcHydro Tools and Datasets Complete

Peter Steeves, GIS Specialist with the Water Resources Discipline (WRD) in the USGS, has completed and "packaged" a wonderful resource for anyone using GIS to work with water resource data in Massachusetts at a statewide or major watershed scale. Pete has long been actively involved with the management of hydrological data and in supporting the modeling and research done by scientists at WRD for DEP and DCR. The project that he recently demonstrated to a collection of EOEEA staff is a Massachusetts compilation of three national datasets, the National Hdyrography Dataset (NHD), the Watershed Boundary Database (WBD) and the National Elevation Dataset (NED). He has organized these data sets by major watershed and set them up to work seamlessly with an ArcGIS 9 package from ESRI called ArcHydro.

For the first time, this GIS environment supports point-specific watershed delineation, watershed attribute query and the management of user-supplied water resource-related data (e.g. biological sampling or stream reach characterization) for the full extent of all major Massachusetts watersheds. We are thus finally able to replace the old Watershed Analyst tools in ArcView 3.x. Pete has included the Connecticut and Merrimack watersheds at a "global" level, so users can delineate contributing areas that include those (for all of New England and beyond!) as well. These tools can be customized by end-users so that after delineating the contributing watershed areas from any point on the surface water network, you can also display your choice of area summaries for that area e.g. average basin slope or total impervious area. These tools are a modeler's dream.

Based on the data and tools described above, Pete is working to bring out a new, totally web-enabled version of the USGS "StreamStats" application which depends on dynamic GIS-supplied inputs to drive regression equations in order to estimate certain key stream flow statistics for any user-supplied location in the state (again, limited to locations on the surface water network.) One exciting potential application is to provide a better estimate of where streams become perennial, a key distinction under the Wetlands Protection regulations. EOEEA is proud of its contribution to this project and happy to continue a long cooperative relationship with USGS. In the coming months we will be working with USGS and the end user community to make sure that these data and tools are freely available to users with the necessary underlying GIS software to use them. Contact Dominique Pahlavan at 617-626-1184 or dominique.pahlavan@state.ma.us for more information.

Where's the Birdie?

In order to maintain a historic snapshot of the extent of bird species habitats, The Massachusetts Audubon Society is undertaking an update to its Massachusetts Breeding Bird Atlas. Except during this data collection effort, they will have the benefit of an online mapping and reporting tool that was developed by Aleda Freeman of MassGIS. Volunteers are needed to assist in the data collection.

Digital Plan Standard

Because we constantly gain new readers of the GISette, we thought it would be a good idea to occasionally remind readers about some of the services, standards and initiatives that we have previously announced. Last month we reminded you about the NAVTEQ geocoding data for government agencies, and this month we remind you of the Standard for Digital Plan Submission to Municipalities. Neil MacGaffey at MassGIS edited the standard and facilitated and coordinated the substantial input from the many stakeholders. The standard enables municipalities to more

easily update their GIS databases by requiring developers to submit an extract of features from their plans in a standardized format. As this standard is adopted by municipalities, the advantage to developers is that they don't have to deal with different competing digital plan submission requirements in each community where they work. After reading about the standard at the above link, questions concerning the standard should be send to neil.macgaffey@state.ma.us.

Database Updates

- **DEP Wetlands (1:12,000) Data Updated** - 4/9/2007
  All coastal watershed-based DEP Wetlands shapefiles have been replaced on the MassGIS ftp site following some recoding of polygons to properly delineate salt marshes in these areas. Both arc and polygon layers were affected.
- **Areas of Critical Environmental Concern Layer Updated** - 3/27/2007
  A few names in the ACECs polygon layer were modified, and the NAME field was formatted to be proper case.
- **Transmissions Lines Layer Updated** - 3/15/2007
  The Transmissions Lines layer has been updated in the Pioneer Valley Planning Commission RPA region with linework proved by the PVPC GIS program. The update on 3/15/07 replaces the version posted on 3/6/07.
- **Long Term Care Residences Layer** - 3/14/2007
  This point layer updates and replaces the Nursing Homes and Rest Homes layer. Now included are points for Assisted Living Facilities.
- **Prisons Layer Updated** - 3/2/2007
  The Prisons layer has been updated. All point locations verified with the 2005 color ortho imagery.
- **New DEP Wetlands Change Layer** - 3/1/2007
  The DEP Wetlands Change Datalayer comprises two polygon feature types, wetlands change from 2001 imagery and wetlands change from 2005 imagery. The layer has been developed and is made available for distribution for the purpose of serving as a tool to monitor changes within the wetland areas which DEP has included in its statewide wetlands datalayer.

ArcMap Tips

We often receive inquiries about ArcMap processes and procedures. Often those inquiring think the source of the problem they are experiencing is the data they have received from MassGIS when the issue actually involves the software they are using. In an effort to help with this potential source of confusion, we will occasionally, or perhaps as a regular feature, highlight some of the common inquiries here in the newsletter.

As ArcMap users, we frequently export to .PDF format so that we can share our maps electronically. If we are using specialized symbols, fill patterns or fonts in our maps, the recipient may not be able to view certain elements in the map as we intended, because their PC does not have these symbols or font sets installed. To have the specialized symbols appear, you must make a simple modification in your export process. After selecting PDF as the "Save as type" in the Export Map window, click on the Format tab under Options. Check box next to "Embed all Document Fonts". Now continue with export.

Staff Announcement, Events, Press

GIS Technician Laura Roy will be working with Sean Sweeney on updating and refining the NAVTEQ address geocoding data. Laura is a New Hampshire native, but comes to us from the USGS in Florida, where she worked on the Suwannee River Basin and Estuary Initiative. Laura graduated from the Geography Department of the University of South Florida. Welcome Laura!

The Boston Globe Interactive Flooding Graphic is an interesting time series graphic that shows how the Boston area might look under a global warming scenario. As you can see from their data credits, MassGIS elevation data was used in creating these maps.

U.S. & Canada Geomatics/Geospatial Event May 7, 2007 Toronto, Ontario, Canada

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Any comments or suggestions about the GISette are welcomed paul.nutting@state.ma.us.

MassGIS-The Commonwealth's Office of Geographic and Environmental Information is located within the Executive Office of Environmental Affairs and is charged with the collection, enhancement, storage and dissemination of the Commonwealth's geographic data.

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